

## CLAIMS

1. A method of dynamically creating a list of operating systems for a target  
5 device in communication with a server prior to executing an operating system on the  
target device, comprising:

receiving from the server, at the target device, an available operating  
systems list of at least one operating system available to the target device;

determining a hardware configuration of the target device;

10 determining if the hardware configuration is compatible with each  
operating system from the available operating systems list; and

generating a compatible operating systems list.

15 2. The method of claim 1 wherein the hardware configuration is determined  
by a network discovery process.

3. The method of claim 1, further comprising:  
mapping a specific location of the target device.

20 4. The method of claim 3 further comprising:  
determining at least one location-based operating system that is based on  
the specific location of the target device.

25 5. The method of claim 4 further comprising:  
determining if the hardware configuration is compatible with the location-  
based operating system.

6. The method of claim 4 wherein the compatible operating systems list does not include the location-based operating system, further comprising:

adding the location-based operating system to the compatible operating systems list.

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7. The method of claim 4, wherein the available operating systems list does not include the location-based operating system, further comprising:

adding the location-based operating system to the available operating systems list.

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8. The method of claim 1, further comprising:  
selecting, at the target device, a target operating system from the compatible operating system list.

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9. The method of claim 8 further comprising:  
receiving at the target device, the target operating system.

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10. The method of claim 9 further comprising:  
providing an initial bootstrap to the target device; and  
executing the initial bootstrap on the target device before the target operating system is selected.

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11. The method of claim 10 further comprising:  
relocating the initial bootstrap after the target operating system is received.

12. Computer program product in a computer usable medium for dynamically creating a list of operating systems for a target device in communication with a server, comprising:

means for receiving at the target device an available operating systems

5 list of at least one operating system available to the target device;

means for determining a hardware configuration of the target device;

means for determining if the hardware configuration is compatible with each operating system from the available operating systems list; and

means for generating a compatible operating systems list.

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13. The program of claim 12 further comprising:

means for discovering the hardware configuration via a network discovery process.

14. The program of claim 12 further comprising:

means for determining at least one location-based operating system based on the location of the target device.

15. The program of claim 14 further comprising:

means for adding the location-based operating system to the available operating systems list.

16. The program of claim 14 further comprising:

means for determining if the hardware configuration is compatible with the location-based operating system.

17. The program of claim 16 further comprising:  
means for adding the location-based operating system to the compatible operating systems list if the hardware configuration is compatible with the location-based operating system.

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18. The program of claim 12, further comprising:  
means for receiving a selection of a target operating system from the compatible operating system list; and  
means for sending the target operating system to the target device.

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19. The program of claim 18 further comprising:  
means for executing a network bootstrap on the target device before the target operating system is selected.

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20. The method of claim 19 further comprising:  
means for relocating the network bootstrap after the target operating system is selected.

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21. A network data processing system comprising:  
means for sending an available operating systems list from a server to a target device prior to executing an operating system on the target device;  
means for determining a hardware configuration of the target device;  
means for determining if the hardware configuration is compatible with each operating system from the available operating systems list; and  
means for generating a compatible operating systems list.

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22. The system of claim 21 further comprising:

means for determining a specific location of the target device;

means for determining at least one location-based operating system that is based on the specific location; and

5 means for determining if the location-based operating system is compatible with the hardware configuration.

23. The system of claim 21 further comprising:

means for executing a network bootstrap program on the target device

10 before a target operating system is selected;

means for selecting the target operating system from the compatible operating systems list;

means for relocating the network bootstrap program after the target operating system is selected; and

15 means for sending the target operating system to the target device.